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(FILE 'HOME' ENTERED AT 11:26:07 ON 17 JAN 2008)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 11:26:38 ON 17
JAN 2008

L1 59 S (BSA FRAG?)
L2 23 DUPLICATE REMOVE L1 (36 DUPLICATES REMOVED)
L3 1 S L2 AND PEPSIN?

=>

DUPLICATE 4

AN 1962:50585 BIOSIS
 DN PREV19623900000853; BA39:853
 TI Electro-phoretic demonstration of specific enzyme substrate complex
 between pepsin and serum albumin. II. Inhibition of complex formation by
 acetyl-L-tryptophane and fatty acids.
 AU CANN, JOHN R.
 CS Univ. Colorado Med. Sch., Denver
 SO JOUR BIOL CHEM, (1962) Vol. 237, No. 3, pp. 707-711.
 DT Article
 FS BA
 LA Unavailable
 ED Entered STN: May 2007
 Last Updated on STN: May 2007
 AB Electrophoretic analyses of pepsin-albumin mixtures have revealed
 inhibition of complexing between pepsin and BSA bovine serum albumin by
 acetyl-L-tryptophane and fatty acids. Enhanced complex formation between
 pepsin and "fatty-acid-free" BSA and HCl- or urea-treated BSA is negated
 by exposure of the substrates to sodium caprylate-caprylic acid. These
 experiments, which afford further evidence for the specificity of the
 electrophoretically demonstrable pepsin-BSA complex,
 are interpreted within the framework of the Linder-strm-Lang mechanism of
 proteolysis. ABSTRACT AUTHORS: Author
 CC Enzymes - General and comparative studies: coenzymes 10802
 IT Major Concepts
 Enzymology (Biochemistry and Molecular Biophysics)
 IT Parts, Structures, & Systems of Organisms
 serum: blood and lymphatics
 IT Chemicals & Biochemicals
 acetyl-L-tryptophane; sodium; specific enzyme; serum albumin; fatty
 acids; pepsin [EC 3.4.23.1]
 ORGN Classifier
 Bovidae 85715
 Super Taxa
 Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
 Organism Name
 bovine (common)
 Taxa Notes
 Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates,
 Nonhuman Mammals, Vertebrates
 RN 7440-23-5 (sodium)
 9001-75-6 (pepsin)
 9001-75-6 (EC 3.4.23.1)

ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 1991:296532 BIOSIS

DN PREV199192017547; BA92:17547

TI POST-FEEDING INDUCTION OF TRYPSIN IN THE MIDGUT OF AEDES-AEGYPTI L.
DIPTERA CULICIDAE IS SEPARABLE INTO TWO CELLULAR PHASES.

AU FELIX C R [Reprint author]; BETSCHART B; BILLINGSLEY P F; FREYVOGEL T A

CS DEP BIOL, IMP COLL SCI TECHNOL MED, PRINCE CONSORT RD, LONDON SW7 2BB,
ENGL, UK

SO Insect Biochemistry, (1991) Vol. 21, No. 2, pp. 197-204.
CODEN: ISBCAN. ISSN: 0020-1790.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 25 Jun 1991
Last Updated on STN: 26 Jun 1991

AB The induction of trypsin activity in the midgut of the mosquito, *Aedes aegypti*, was studied following meals of chicken blood, and several protein and peptide diets. Various concentrations of bovine serum albumin (BSA) in 0.15 M NaCl stimulated trypsin activity, in a similar fashion to the initial increase observed after a normal blood meal. Trypsin synthesis was also initiated when *Ae. aegypti* were fed on glutaraldehyde cross-linked BSA and on BSA fragments prepared by both pepsin and cyanogen bromide cleavage. Non-soluble proteins, in the form of glutaraldehyde-fixed erythrocyte ghosts, induced a delayed and reduced trypsin response, whilst small peptides from neutralized liver digests did not induce trypsin activity until 8-10 h after feeding. Metabolic inhibitors had varying effects on the post-feeding activity of trypsin stimulated by BSA feeding. Cycloheximide, a peptidyl transferase inhibitor prevented expression of all activity in vivo, whereas α -amanitin (RNA-polymerase inhibitor) did not affect trypsin activity in the first 10 h after feeding. At 20 μ g/ml concentration in the diet, actinomycin D (RNA synthesis inhibitor) caused temporary superinduction followed by inhibition of trypsin activity, but at lower concentrations, the later phase of trypsin activity was inhibited. The results suggest that post-feeding induction of trypsin activity in *Ae. aegypti* is a two-phase process regulated at the midgut cellular level. The first phase of trypsin synthesis is stimulated by soluble proteins of variable molecular weights, and only involves translation of messenger RNA already available within the midgut cells. The second phase is stimulated by small peptides and requires complete synthesis of new mRNA from DNA.

CC Cytology - Animal 02506
Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Proteins, peptides and amino acids 10064
Enzymes - Physiological studies 10808
Metabolism - Proteins, peptides and amino acids 13012
Nutrition - General dietary studies 13214
Nutrition - Proteins, peptides and amino acids 13224
Digestive system - Physiology and biochemistry 14004
Blood - General and methods 15001
Economic entomology - Animal pests 60012
Invertebrata: comparative, experimental morphology, physiology and pathology - Insecta: physiology 64076

IT Major Concepts
Digestive System (Ingestion and Assimilation); Enzymology (Biochemistry and Molecular Biophysics); Metabolism; Nutrition; Physiology

IT Miscellaneous Descriptors
BLOOD MEAL PROTEIN DIET PEPTIDE DIET CYCLOHEXIMIDE ALPHA AMANITIN
ACTINOMYCIN D MESSENGER RNA DNA

ORGN Classifier
Diptera 75314
Super Taxa
Insecta; Arthropoda; Invertebrata; Animalia
Taxa Notes

Animals, Arthropods, Insects, Invertebrates

RN 9002-07-7 (TRYPSIN)
66-81-9 (CYCLOHEXIMIDE)
23109-05-9 (ALPHA-AMANITIN)
50-76-0 (ACTINOMYCIN D)

=>

AN 1988:155592 BIOSIS
DN PREV198885079245; BA85:79245
TI MONOCLONAL ANTIBODIES TO BOVINE SERUM ALBUMIN AFFINITY AND SPECIFICITY DETERMINATIONS.
AU MOREL G A [Reprint author]; YARMUSH D M; COLTON C K; BENJAMIN D C; YARMUSH M L
CS MASSACHUSETTS INST TECHNOL, DEP CHEM ENGINEERING, ROOM 66-501, CAMBRIDGE, MA 02139, USA
SO Molecular Immunology, (1988) Vol. 25, No. 1, pp. 7-16.
CODEN: MOIMD5. ISSN: 0161-5890.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 22 Mar 1988
Last Updated on STN: 22 Mar 1988
AB A panel of 12 monoclonal antibodies (Mab) to bovine serum albumin (BSA) was developed and characterized as to their physicochemical and immunological properties. Affinity constants of the Mab varied over a wide range from 105 to 108 M-1. Mab were assembled into several groups of non- or minimally interacting antibodies by analysis of competitive binding experiments, and BSA domain and subdomain specificities of the Mab were assigned by analysis of results of Mab binding to purified BSA fragments. Further fine specificity delineation was accomplished by examination of cross-reactivity patterns to several mammalian albumins. The data suggest that some of the low affinity Mab recognize sites on different portions of the BSA molecule, indicating that similar epitopes exist on different domains of the BSA molecule.
CC Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Biophysics - Molecular properties and macromolecules 10506
Blood - Blood and lymph studies 15002
Immunology - General and methods 34502
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Immune System (Chemical Coordination and Homeostasis)
IT Miscellaneous Descriptors
HUMAN MOUSE IMMUNOCHEMISTRY EPITOPES COMPETITIVE BINDING EXPERIMENTS
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

ANSWER 14 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1980:210483 CAPLUS

DN 92:210483

OREF 92:34031a,34034a

ED Entered STN: 12 May 1984

TI Isolation and characterization of a peptic fragment of bovine serum albumin

AU Khan, M. Yahiya

CS J. N. Med. Coll., Aligarh Muslim Univ., Aligarh, 202 001, India

SO Indian Journal of Biochemistry & Biophysics (1980), 17(1), 18-20

CODEN: IJBBBQ; ISSN: 0301-1208

DT Journal

LA English

CC 6-3 (General Biochemistry)

AB Using a monomeric form of bovine serum albumin (BSA), a peptic fragment designated as BSA-P1-385 of the protein was isolated. The N- and C-terminal amino acid residues of the fragment, which is known to constitute the N-terminal 2/3 of the BSA mol. (i.e. 2 of the 3 domains of BSA), were aspartic acid and leucine, resp. As determined by gel filtration, the mol. weight of

the fragment was .apprx.47,000. Some important hydrodynamic properties of BSA-P1-385, such as Stokes radius, frictional ratio, axial ratio, and diffusion coefficient, were calculated from its gel filtration behavior and are 2.93×10^{-7} cm, 1.23, 4.52, and 7.6×10^{-7} cm²/s, resp.

ST albumin pepsin fragment property

IT Chains, chemical

(domains of, of serum albumin, isolation by peptic degradation)

IT Diffusion

(of serum albumin peptic fragment)

IT Albumins, blood serum

RL: BIOL (Biological study)

(pepsin-produced fragment of, purification and properties of)

IT 9001-75-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with serum albumins, polypeptide fragment from)

AN 1973:68461 CAPLUS

DN 78:68461

OREF 78:10851a,10854a

ED Entered STN: 12 May 1984

TI Steroid binding properties of some peptide fragments of bovine serum albumin obtained on peptic digestion

AU Pearlman, William H.; Fong, I. F. F.

CS Sch. Med., Univ. North Carolina, Chapel Hill, NC, USA

SO Journal of Biological Chemistry (1972), 247(24), 8078-84

CODEN: JBCHA3; ISSN: 0021-9258

DT Journal

LA English

CC 6-3 (General Biochemistry)

AB To elucidate the structural characteristics of bovine serum albumin (BSA) which allow for steroid binding, BSA was digested with pepsin under conditions which afford maximal retention of steroid binding activity consistent with a maximal degree of peptide fragmentation. Digestion with pepsin, pH 3.0, for 2 hrs at 25° afforded a complex mixture of peptide fragments with mol. wts. of .apprx.14,000 (a major class of components), and 27,000 and 34,000 (minor classes) estimated on Na dodecyl sulfate gel electrophoresis of the digest. As much as 40 to 50% of the initial steroid binding activity was retained in the BSA digest; the steroids studied were progesterone, testosterone, and 17 β -estradiol. Steroid binding activity was empirically defined as the product of the ratio of bound to unbound steroid times the reciprocal of the total protein or peptide concentration (g/l.) in an assay system containing Sephadex G-25 or G-10 under conditions of equilibrium. The crude BSA digest was treated successively with 2% and 10% trichloroacetic acid (I); the resp. I-precipitable peptides were chromatographed on Sephadex G-75. The 2% I. chromatog. fractions exhibited a relatively high progesterone binding activity, and also appreciable testosterone and estradiol binding, whereas successive chromatog. fractions of the 10% I fraction exhibited diminishing steroid binding activity. Binding activity correlated with the absorbance ratio, 280:258 nm, of the resp. chromatog. fractions, suggesting that peptide fragments which are richer in tyrosine tend to retain steroid binding activity to a greater degree. Although the bulk of the peptide material remains to be resolved, two peptide fragments, KL and VI, were isolated from the 2% I and 10% I fractions, resp. Peptide KL (mol. weight 10,050) is rich in tyrosine. The equilibrium constant, K , for the formation of a complex of peptide KL with progesterone, testosterone, or 17 β -estradiol at 25° was .apprx.0.44, 0.18, or 0.33 + 104 M⁻¹, resp. peptide VI (mol. weight 2766) appears to be identical with the N-terminal or Asp fragment of BSA previously isolated by Peters and Hawn (1967). Peptide VI contains no tyrosine and exhibits very little steroid-binding activity.

ST steroid binding serum albumin peptide; protein steroid binding

IT Albumins, blood serum

RL: BIOL (Biological study)

(steroid binding by peptide fragments of)

IT Peptides, biological studies

RL: BIOL (Biological study)

(steroid binding by, from albumin digests)

IT 50-28-2, biological studies 57-83-0, biological studies 58-22-0

RL: BIOL (Biological study)

(peptides from albumin digest binding of)

AN 1973:68461 CAPLUS

DN 78:68461

OREF 78:10851a,10854a

ED Entered STN: 12 May 1984

TI Steroid binding properties of some peptide fragments of bovine serum albumin obtained on peptic digestion

AU Pearlman, William H.; Fong, I. F. F.

CS Sch. Med., Univ. North Carolina, Chapel Hill, NC, USA

SO Journal of Biological Chemistry (1972), 247(24), 8078-84

CODEN: JBCHA3; ISSN: 0021-9258

DT Journal

LA English

CC 6-3 (General Biochemistry)

AB To elucidate the structural characteristics of bovine serum albumin (BSA) which allow for steroid binding, BSA was digested with pepsin under conditions which afford maximal retention of steroid binding activity consistent with a maximal degree of peptide fragmentation. Digestion with pepsin, pH 3.0, for 2 hrs at 25° afforded a complex mixture of peptide fragments with mol. wts. of .apprx.14,000 (a major class of components), and 27,000 and 34,000 (minor classes) estimated on Na dodecyl sulfate gel electrophoresis of the digest. As much as 40 to 50% of the initial steroid binding activity was retained in the BSA digest; the steroids studied were progesterone, testosterone, and 17 β -estradiol. Steroid binding activity was empirically defined as the product of the ratio of bound to unbound steroid times the reciprocal of the total protein or peptide concentration (g/l.) in an assay system containing Sephadex G-25 or G-10 under conditions of equilibrium. The crude BSA digest was treated successively with 2% and 10% trichloroacetic acid (I); the resp. I-precipitable peptides were chromatographed on Sephadex G-75. The 2% I chromatog. fractions exhibited a relatively high progesterone binding activity, and also appreciable testosterone and estradiol binding, whereas successive chromatog. fractions of the 10% I fraction exhibited diminishing steroid binding activity. Binding activity correlated with the absorbance ratio, 280:258 nm, of the resp. chromatog. fractions, suggesting that peptide fragments which are richer in tyrosine tend to retain steroid binding activity to a greater degree. Although the bulk of the peptide material remains to be resolved, two peptide fragments, KL and VI, were isolated from the 2% I and 10% I fractions, resp. Peptide KL (mol. weight 10,050) is rich in tyrosine. The equilibrium constant, K , for the formation of a complex of peptide KL with progesterone, testosterone, or 17 β -estradiol at 25° was .apprx.0.44, 0.18, or 0.33 + 104 M⁻¹, resp. peptide VI (mol. weight 2766) appears to be identical with the N-terminal or Asp fragment of BSA previously isolated by Peters and Hawn (1967). Peptide VI contains no tyrosine and exhibits very little steroid-binding activity.

ST steroid binding serum albumin peptide; protein steroid binding

IT Albumins, blood serum

RL: BIOL (Biological study)
(steroid binding by peptide fragments of)

IT Peptides, biological studies

RL: BIOL (Biological study)
(steroid binding by, from albumin digests)

IT 50-28-2, biological studies 57-83-0, biological studies 58-22-0

RL: BIOL (Biological study)
(peptides from albumin digest binding of)

AN 1991:296532 BIOSIS
 DN PREV199192017547; BA92:17547
 TI POST-FEEDING INDUCTION OF TRYPSIN IN THE MIDGUT OF AEDES-AEGYPTI L.
 DIPTERA CULICIDAE IS SEPARABLE INTO TWO CELLULAR PHASES.
 AU FELIX C R [Reprint author]; BETSCHART B; BILLINGSLEY P F; FREYVOGEL T A
 CS DEP BIOL, IMP COLL SCI TECHNOL MED, PRINCE CONSORT RD, LONDON SW7 2BB,
 ENGL, UK
 SO Insect Biochemistry, (1991) Vol. 21, No. 2, pp. 197-204.
 CODEN: ISBCAN. ISSN: 0020-1790.
 DT Article
 FS BA
 LA ENGLISH
 ED Entered STN: 25 Jun 1991
 Last Updated on STN: 26 Jun 1991
 AB The induction of trypsin activity in the midgut of the mosquito, *Aedes aegypti*, was studied following meals of chicken blood, and several protein and peptide diets. Various concentrations of bovine serum albumin (BSA) in 0.15 M NaCl stimulated trypsin activity, in a similar fashion to the initial increase observed after a normal blood meal. Trypsin synthesis was also initiated when *Ae aegypti* were fed on glutaraldehyde cross-linked BSA and on BSA fragments prepared by both pepsin and cyanogen bromide cleavage. Non-soluble proteins, in the form of glutaraldehyde-fixed erythrocyte ghosts, induced a delayed and reduced trypsin response, whilst small peptides from neutralized liver digests did not induce trypsin activity until 8-10 h after feeding. Metabolic inhibitors had varying effects on the post-feeding activity of trypsin stimulated by BSA feeding. Cycloheximide, a peptidyl transferase inhibitor prevented expression of all activity in vivo, whereas α -amanitin (RNA-polymerase inhibitor) did not affect trypsin activity in the first 10 h after feeding. At 20 μ g/ml concentration in the diet, actinomycin D (RNA synthesis inhibitor) caused temporary superinduction followed by inhibition of trypsin activity, but at lower concentrations, the later phase of trypsin activity was inhibited. The results suggest that post-feeding induction of trypsin activity in *Ae. aegypti* is a two-phase process regulated at the midgut cellular level. The first phase of trypsin synthesis is stimulated by soluble proteins of variable molecular weights, and only involves translation of messenger RNA already available within the midgut cells. The second phase is stimulated by small peptides and requires complete synthesis of new mRNA from DNA.
 CC Cytology - Animal 02506
 Biochemistry studies - General 10060
 Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
 Biochemistry studies - Proteins, peptides and amino acids 10064
 Enzymes - Physiological studies 10808
 Metabolism - Proteins, peptides and amino acids 13012
 Nutrition - General dietary studies 13214
 Nutrition - Proteins, peptides and amino acids 13224
 Digestive system - Physiology and biochemistry 14004
 Blood - General and methods 15001
 Economic entomology - Animal pests 60012
 Invertebrata: comparative, experimental morphology, physiology and pathology - Insecta: physiology 64076
 IT Major Concepts
 Digestive System (Ingestion and Assimilation); Enzymology (Biochemistry and Molecular Biophysics); Metabolism; Nutrition; Physiology
 IT Miscellaneous Descriptors
 BLOOD MEAL PROTEIN DIET PEPTIDE DIET CYCLOHEXIMIDE ALPHA AMANITIN
 ACTINOMYCIN D MESSENGER RNA DNA
 ORGN Classifier
 Diptera 75314
 Super Taxa
 Insecta; Arthropoda; Invertebrata; Animalia

Taxa Notes

Animals, Arthropods, Insects, Invertebrates

RN 9002-07-7 (TRYPSIN)
66-81-9 (CYCLOHEXIMIDE)
23109-05-9 (ALPHA-AMANITIN)
50-76-0 (ACTINOMYCIN D)

AN 1978:134005 BIOSIS
 DN PREV197865021005; BA65:21005
 TI IMMUNO SUPPRESSIVE PROPERTIES OF A PEPTIC FRAGMENT OF BOVINE
 SERUM ALBUMIN.
 AU MUCKERHEIDE A [Reprint author]; PESCE A J; GABRIEL MICHAEL J
 CS DEP MICROBIOL, UNIV CINCI COLL MED, CINCINNATI, OHIO 45267, USA
 SO Journal of Immunology, (1977) Vol. 119, No. 4, pp. 1340-1345.
 CODEN: JOIMA3. ISSN: 0022-1767.
 DT Article
 FS BA
 LA ENGLISH
 AB The immunogenic properties of a peptic fragment of BSA
 [bovine serum albumin] were investigated. BSA was subjected to
 limited proteolysis by pepsin and the resulting
 fragments were separated on DEAE cellulose. The fragment
 under consideration, fraction Ia (MW 8000-10,000), did not precipitate
 with anti-BSA serum but did inhibit the binding of specific
 antibody to labeled BSA, indicating the presence of determinants
 found on the native antigen. BDF1 mice immunized with fraction Ia in Al
 (OH)3 gel or in complete Freund's adjuvant produced no significant
 antibody response as measured by passive cutaneous anaphylaxis (PCA) or by
 a modified Farr assay. The fragment elicited a PCA reaction in
 mouse skin sensitized with anti-BSA serum. Treatment of mice
 with single doses of fraction Ia at various time intervals before
 immunization with BSA resulted in significant suppression of the
 formation of anti-BSA antibody. The conditions of suppression
 of the Ig[immunoglobulin]E response by the peptic fragment were
 studied in greater detail. Such suppression probably can be attributed to
 the presence of specific T [thymus-derived] suppressor cells.
 CC Radiation biology - Radiation and isotope techniques 06504
 Biochemistry methods - Proteins, peptides and amino acids 10054
 Biochemistry methods - Carbohydrates 10058
 Biochemistry studies - Proteins, peptides and amino acids 10064
 Biochemistry studies - Carbohydrates 10068
 Biophysics - Methods and techniques 10504
 Biophysics - Molecular properties and macromolecules 10506
 Enzymes - Methods 10804
 Movement 12100
 Pathology - Inflammation and inflammatory disease 12508
 Metabolism - Carbohydrates 13004
 Metabolism - Proteins, peptides and amino acids 13012
 Blood - Blood and lymph studies 15002
 Endocrine - Thymus 17016
 Integumentary system - Pathology 18506
 Physiology and biochemistry of bacteria 31000
 Immunology - General and methods 34502
 Immunology - Immunopathology, tissue immunology 34508
 Allergy 35500
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport
 and Circulation); Endocrine System (Chemical Coordination and
 Homeostasis); Immune System (Chemical Coordination and Homeostasis)
 IT Miscellaneous Descriptors
 MOUSE COMPLETE FREUNDS ADJUVANT SUPPRESSED IMMUNO GLOBULIN E RESPONSE
 SUPPRESSOR THYMUS DERIVED CELLS
 ORGN Classifier
 Actinomycetes and Related Organisms 08800
 Super Taxa
 Eubacteria; Bacteria; Microorganisms
 Taxa Notes
 Bacteria, Eubacteria, Microorganisms
 ORGN Classifier
 Bovidae 85715

2-4 fragments
produced.

AN 1978:134005 BIOSIS
DN PREV197865021005; BA65:21005
TI IMMUNO SUPPRESSIVE PROPERTIES OF A PEPTIC FRAGMENT OF BOVINE
SERUM ALBUMIN.
AU MUCKERHEIDE A [Reprint author]; PESCE A J; GABRIEL MICHAEL J
CS DEP MICROBIOL, UNIV CINCI COLL MED, CINCINNATI, OHIO 45267, USA
SO Journal of Immunology, (1977) Vol. 119, No. 4, pp. 1340-1345.
CODEN: JOIMA3. ISSN: 0022-1767.
DT Article
FS BA
LA ENGLISH
AB The immunogenic properties of a peptic fragment of BSA
[bovine serum albumin] were investigated. BSA was subjected to
limited proteolysis by pepsin and the resulting
fragments were separated on DEAE cellulose. The fragment
under consideration, fraction Ia (MW 8000-10,000), did not precipitate
with anti-BSA serum but did inhibit the binding of specific
antibody to labeled BSA, indicating the presence of determinants
found on the native antigen. BDF1 mice immunized with fraction Ia in Al
(OH)3 gel or in complete Freund's adjuvant produced no significant
antibody response as measured by passive cutaneous anaphylaxis (PCA) or by
a modified Farr assay. The fragment elicited a PCA reaction in
mouse skin sensitized with anti-BSA serum. Treatment of mice
with single doses of fraction Ia at various time intervals before
immunization with BSA resulted in significant suppression of the
formation of anti-BSA antibody. The conditions of suppression
of the Ig[immunoglobulin]E response by the peptic fragment were
studied in greater detail. Such suppression probably can be attributed to
the presence of specific T [thymus-derived] suppressor cells.
CC Radiation biology - Radiation and isotope techniques 06504
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry methods - Carbohydrates 10058
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Enzymes - Methods 10804
Movement 12100
Pathology - Inflammation and inflammatory disease 12508
Metabolism - Carbohydrates 13004
Metabolism - Proteins, peptides and amino acids 13012
Blood - Blood and lymph studies 15002
Endocrine - Thymus 17016
Integumentary system - Pathology 18506
Physiology and biochemistry of bacteria 31000
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508
Allergy 35500
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport
and Circulation); Endocrine System (Chemical Coordination and
Homeostasis); Immune System (Chemical Coordination and Homeostasis)
IT Miscellaneous Descriptors
MOUSE COMPLETE FREUNDS ADJUVANT SUPPRESSED IMMUNO GLOBULIN E RESPONSE
SUPPRESSOR THYMUS DERIVED CELLS
ORGN Classifier
Actinomycetes and Related Organisms 08800
Super Taxa
Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715

Super Taxa

Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia

Taxa Notes

Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates,
Nonhuman Mammals, Vertebrates

ORGN Classifier

Muridae 86375

Super Taxa

Rodentia; Mammalia; Vertebrata; Chordata; Animalia

Taxa Notes

Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals,
Rodents, Vertebrates

Super Taxa

Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia

Taxa Notes

Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates,
Nonhuman Mammals, Vertebrates

ORGN Classifier

Muridae 86375

Super Taxa

Rodentia; Mammalia; Vertebrata; Chordata; Animalia

Taxa Notes

Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals,
Rodents, Vertebrates

ANSWER 8 OF 26 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 1967:55184 BIOSIS

DN PREV19674800055184; BA48:55184

TI Immunochemical studies of the tryptic, chymotryptic and peptic peptides of heat denatured bovine serum albumin.

AU LIU, C. T.; DAS, B. R.; MAURER, P. H.

CS N. J. Coll. Med. and Dent., Jersey City, N. J., USA

SO IMMUNOCHEMISTRY, (1967) Vol. 4, No. 1, pp. 1-10.

DT Article

FS BA

LA Unavailable

ED Entered STN: May 2007
Last Updated on STN: May 2007

AB An immune system, viz. heat denatured bovine serum albumin (HDBSA) and rabbit anti-HDBSA was studied to learn the nature of the antibody combining sites. Enzyme (trypsin, chymotrypsin, pepsin) digested HDBSA yielded immunologically active peptides, which were dialyzable and non-dialyzable. The peptides had molecular weights ranging from 5000 to 100,000 and showed differences in amino acid composition. The immunological activity with anti-HDBSA sera was proportional to the mol. weight of the peptide. All active fractions, except those from peptic digests, also evoked passive cutaneous anaphylaxis (PCA) reactions in guinea pigs with antisera to native BSA. Ten to 20 times more weight of dialyzable fraction compared with non-dialyzable fraction was needed to produce equivalent inhibition of the homologous precipitin reaction and to evoke PCA reactions. Performate oxidation of HDBSA reduced immunological activity 50% and further peptic digestion abolished the ability to elicit the PCA reaction. Degradation of the trypsin resistant core of HDBSA with chymotrypsin yielded additional dialyzable peptides with molecular weights between 5000 and 10,000 having immunological activities. An immunologically active fragment of mol. weight about 7200 was isolated from the tryptic digest. The immunological findings are consistent with the concept that HDBSA is a partially extended molecule having antibody combining sites distributed among several areas on the surface rather than being restricted to one localized region. ABSTRACT AUTHORS: Authors

CC Immunology - General and methods 34502

IT Major Concepts
Immune System (Chemical Coordination and Homeostasis)

IT Parts, Structures, & Systems of Organisms
immune system: immune system; sera: blood and lymphatics; serum: blood and lymphatics

IT Chemicals & Biochemicals
pepsin [EC 3.4.23.1]; serum albumin; trypsin [EC 3.4.21.4]; chymotrypsin [EC 3.4.21.1]; antibody; amino acid

ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
bovine (common)
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Caviidae 86300
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
guinea pigs (common)
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

ORGN Classifier

ANSWER 8 OF 26 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 1967:55184 BIOSIS

DN PREV19674800055184; BA48:55184

TI Immunochemical studies of the tryptic, chymotryptic and peptic peptides of heat denatured bovine serum albumin.

AU LIU, C. T.; DAS, B. R.; MAURER, P. H.

CS N. J. Coll. Med. and Dent., Jersey City, N. J., USA

SO IMMUNOCHEMISTRY, (1967) Vol. 4, No. 1, pp. 1-10.

DT Article

FS BA

LA Unavailable

ED Entered STN: May 2007
Last Updated on STN: May 2007

AB An immune system, viz. heat denatured bovine serum albumin (HDBSA) and rabbit anti-HDBSA was studied to learn the nature of the antibody combining sites. Enzyme (trypsin, chymotrypsin, pepsin) digested HDBSA yielded immunologically active peptides, which were dialyzable and non-dialyzable. The peptides had molecular weights ranging from 5000 to 100,000 and showed differences in amino acid composition. The immunological activity with anti-HDBSA sera was proportional to the mol. weight of the peptide. All active fractions, except those from peptic digests, also evoked passive cutaneous anaphylaxis (PCA) reactions in guinea pigs with antisera to native BSA. Ten to 20 times more weight of dialyzable fraction compared with non-dialyzable fraction was needed to produce equivalent inhibition of the homologous precipitin reaction and to evoke PCA reactions. Performate oxidation of HDBSA reduced immunological activity 50% and further peptic digestion abolished the ability to elicit the PCA reaction. Degradation of the trypsin resistant core of HDBSA with chymotrypsin yielded additional dialyzable peptides with molecular weights between 5000 and 10,000 having immunological activities. An immunologically active fragment of mol. weight about 7200 was isolated from the tryptic digest. The immunological findings are consistent with the concept that HDBSA is a partially extended molecule having antibody combining sites distributed among several areas on the surface rather than being restricted to one localized region. ABSTRACT AUTHORS: Authors

CC Immunology - General and methods 34502

IT Major Concepts
Immune System (Chemical Coordination and Homeostasis)

IT Parts, Structures, & Systems of Organisms
immune system: immune system; sera: blood and lymphatics; serum: blood and lymphatics

IT Chemicals & Biochemicals
pepsin [EC 3.4.23.1]; serum albumin; trypsin [EC 3.4.21.4];
chymotrypsin [EC 3.4.21.1]; antibody; amino acid

ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
bovine (common)
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Caviidae 86300
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
guinea pigs (common)
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

ORGN Classifier

Leporidae 86040

Super Taxa

Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

rabbit (common)

Taxa Notes

Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman

Mammals, Vertebrates

RN 9001-75-6 (pepsin)
9001-75-6 (EC 3.4.23.1)
9002-07-7 (trypsin)
9002-07-7 (EC 3.4.21.4)
9004-07-3 (chymotrypsin)
9004-07-3 (EC 3.4.21.1)

Leporidae 86040

Super Taxa

Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

rabbit (common)

Taxa Notes

Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman
Mammals, Vertebrates

RN 9001-75-6 (pepsin)
9001-75-6 (EC 3.4.23.1)
9002-07-7 (trypsin)
9002-07-7 (EC 3.4.21.4)
9004-07-3 (chymotrypsin)
9004-07-3 (EC 3.4.21.1)

ANSWER 14 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1980:210483 CAPLUS

DN 92:210483

OREF 92:34031a,34034a

ED Entered STN: 12 May 1984

TI Isolation and characterization of a peptic fragment of bovine serum albumin

AU Khan, M. Yahiya

CS J. N. Med. Coll., Aligarh Muslim Univ., Aligarh, 202 001, India

SO Indian Journal of Biochemistry & Biophysics (1980), 17(1), 18-20

CODEN: IJBBBQ; ISSN: 0301-1208

DT Journal

LA English

CC 6-3 (General Biochemistry)

AB Using a monomeric form of bovine serum albumin (BSA), a peptic fragment designated as BSA-P1-385 of the protein was isolated. The N- and C-terminal amino acid residues of the fragment, which is known to constitute the N-terminal 2/3 of the BSA mol. (i.e. 2 of the 3 domains of BSA), were aspartic acid and leucine, resp. As determined by gel filtration, the mol. weight of

the fragment was .apprx.47,000. Some important hydrodynamic properties of BSA-P1-385, such as Stokes radius, frictional ratio, axial ratio, and diffusion coefficient, were calculated from its gel filtration behavior and are $2.93 + 10^{-7}$ cm, 1.23, 4.52, and $7.6 + 10^{-7}$ cm²/s, resp.

ST albumin pepsin fragment property

IT Chains, chemical

(domains of, of serum albumin, isolation by peptic degradation)

IT Diffusion

(of serum albumin peptic fragment)

IT Albumins, blood serum

RL: BIOL (Biological study)

(pepsin-produced fragment of, purification and properties of)

IT 9001-75-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with serum albumins, polypeptide fragment from)